

Remarks

This Application has been carefully reviewed in light of the Final Office Action mailed July 27, 2005, and the Advisory Action mailed November 14, 2005. Although Applicants believe all pending claim are allowable over the Examiner's rejections without amendment, Applicants have made clarifying amendments to Claims 1-16, 18-19, and 22-23. At least certain of these amendments are not narrowing or related to the Examiner's rejections. None of these amendments is considered necessary for patentability. Applicants have canceled Claims 20-21 and 24-25 without prejudice or disclaimer,¹ and have added new dependent Claims 26-41 and new independent Claims 42-43, none of which are believed to introduce any new matter. The Specification has also been amended to correct various typographical errors. Applicants respectfully request reconsideration and allowance of all pending claims and consideration and allowance of all new claims.

I. The Claims Recite Patentable Subject Matter

The Examiner rejects Claims 1-25 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicants respectfully disagree.

The patent laws define patentable subject matter as "any new and useful process, machine, manufacture or composition of matter, or any new and useful improvement thereto." *See* 35 U.S.C. § 101. When an abstract idea is reduced to a practical application, the abstract idea no longer stands alone if the practical application of the abstract idea produces a useful, concrete, and tangible result. This then satisfies the requirements of 35 U.S.C. § 101. *See In re Alappat*, 33 F.3d 1526, 1544, 31 U.S.P.Q.2d 1545, 1557 (Fed. Cir. 1994); *see also State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373, 47 U.S.P.Q.2d 1596, 1601-02 (Fed. Cir. 1998). While an abstract idea by itself may not satisfy the requirements of 35 U.S.C. § 101, an abstract idea when practically applied to produce a useful, concrete, and tangible result satisfies 35 U.S.C. § 101. *See AT&T Corp. v. Excel Comm. Inc.*, 172 F.3d 1352, 1357, 50 U.S.P.Q. 1447, 1452 (Fed. Cir. 1999) (stating that as technology progressed, the CCPA overturned some of the earlier limiting principles regarding 35 U.S.C. § 101 and announced more expansive

¹ These cancellations are not the result of any rejection made by the Examiner.

principles formulated with computer technology in mind); *see also In re Musgrave*, 431 F.2d 882, 167 U.S.P.Q. 280 (CCPA 1970) (cited by the Federal Circuit in *AT&T Corp.*, 172 F.3d at 1356). Thus, producing a useful, concrete, and tangible result is the key to patentability according to *State Street* and other applicable case law.

“Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101.” M.P.E.P. § 2106. Indeed, a method or process remains statutory even if some or all of the steps therein can be performed in the human mind, with the aid of the human mind, or because it may be necessary for one performing the method or process to think. *See In re Musgrave*, 431 F.2d at 893, 167 U.S.P.Q. at 289. As stated by the Federal Circuit in *State Street* and as explicitly confirmed in the M.P.E.P., “[T]ransformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces ‘a useful, concrete, and tangible result’ -- a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.” *State Street*, 149 F.3d at 1373, 47 U.S.P.Q.2d at 1601-02; M.P.E.P. § 2106.

Furthermore, the M.P.E.P. states:

The applicant is in the best position to explain why an invention is believed useful. Office personnel should therefore *focus their efforts* on point out *statements made in the specification* that identify all practical applications for the invention. Office personnel should rely on such statements throughout the examination when assessing the invention for compliance with all statutory criteria. An applicant may assert more than one practical application, but only one is necessary to satisfy the utility requirement.

M.P.E.P. § 2106 (*emphasis added*).

Applicants’ claims are not merely manipulations of abstract ideas. Instead, each of Applicants’ claims clearly recites a useful, concrete, and tangible result, which is all the

law requires for a claim to be directed to statutory subject matter, and is therefore directed to patentable subject matter.²

For example, independent Claim 1, as amended, recites a “data mining system comprising” the following:

- a client; and
- a service broker operable to:
 - receive a consultation request from the client through a computer network, the consultation request associated with data for consulting a Neugent;
 - forward the consultation request to the Neugent to invoke a consultation of the Neugent, the Neugent operable to perform a predictive analysis with respect to the data for consulting the Neugent that is associated with the consultation request; and
 - forward to the client through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent.

Thus, “forward[ing] to the client through the computer network a result object returned by the Neugent, the result object comprising a prediction determined by the Neugent with respect to the data for consulting the Neugent” is one practical application of independent Claim 1, the useful, concrete, and tangible result being the result object returned by the Neugent that is forwarded to the client through the computer network and that comprises a prediction determined by the Neugent with respect to the data for consulting the Neugent.

Additionally, Applicants’ Specification provides, for example, a discussion of certain deficiencies of some systems:

² Applicants note that to the extent the Examiner bases any part of this rejection on a “technological arts” requirement, the Board of Patent Appeals and Interferences, in a precedential opinion, recently determined that no “technological arts” requirement exists under 35 U.S.C. § 101. *See Ex Parte Lundgren*, 2004 WL 3561262, *5, Appeal No. 2003-3088 (Bd. Pat. App. & Int. 2004) (also available at <http://www.uspto.gov/web/offices/dcom/bpai/prec/2003-2088.pdf>) (reversing an examiner’s rejection under 35 U.S.C. § 101 and stating that “[o]ur determination is that there is currently no judicially recognized separate ‘technological arts’ test to determine patent eligible subject matter under § 101” and “we decline to create one”).² Thus, Applicants respectfully submit that a rejection based on a “technological arts” requirement is or would be improper.

Data mining is the analysis of large quantities of data in order to extract useful information from the data, such as for making predictions over new data (also called predictive analysis). A number of data mining products are available. However, current commercial products which allow data mining of the wealth of information on the Web require the client application to maintain a predictive model, although a service broker may collect or store raw data and forward it to the client upon demand. Since the client must maintain the predictive model, the resources of the client machine may be overwhelmed when the application is executed.

Specification, Page 2, Line 2 through Page 3, Line 6.

Additionally, with respect to certain embodiments of Applicants' invention, the Specification provides the following:

- The consultation request, according to one embodiment, includes data for consulting Neugent 13. Specification, Page 9, Lines 8-9.
- According to another embodiment, the consultation request includes identification of a source of data for consulting a Neugent 13. Specification, Page 9, Lines 12-14.
- According to another embodiment, the service broker 15 is a remote server. The consultation request from the client 11 to the remote server may include an Extensible Mark-up Language document. Specification, Page 9, Lines 17-20.
- Neugents technologies include assorted methodologies for recognizing patterns in data and for using those patterns to make predictions on new data. New data is analyzed to determine the pattern into which it falls, thereby providing a prediction of future behavior based on the behavior that has characterized the pattern in the past. Specification, Page 11, Lines 4-10.
- Consult is a process of providing new data to a Neugent (also referred to as data for consulting the Neugent) so that the Neugent uses its model, as developed during training, to provide a prediction from the new data. Specification, Page 14, Lines 17-20.

The Specification also identifies particular advantages that are realized by certain embodiments of Applicants' invention:

Accordingly, the methodologies described in this disclosure place no burden on the client to maintain a predictive model. The complexity of client/server interfaces may be reduced by simplifying protocols and by hiding issues (for example, making them transparent to the user) of platform technology mismatches.

Specification, Page 15, Lines 2-7. Thus, Applicants' specification asserts at least one practical application of certain embodiments of Applicants' invention and identifies the advancement of the technical arts.³

For at least these reasons, Applicants respectfully submit that independent Claim 1 and its dependent claims recite patentable subject matter. For at least certain analogous reasons, Applicants respectfully submit that independent Claims 18-19 and their dependent claims recite patentable subject matter. Thus, Applicants respectfully request that the Examiner withdraw the rejections of these claims under 35 U.S.C. § 101.

As another example, independent Claim 22, as amended, recites a "method for providing to a remote client machine a service to train a Neugent, comprising" the following:

- receiving a train request from the remote client machine through a computer network, the train request associated with training data for training the Neugent;
- forwarding the train request to the Neugent to invoke training of the Neugent, training of the Neugent comprising causing the Neugent to perform a data analysis of the training data; and
- forwarding to the remote client machine through the computer network a training result object returned by the Neugent, the training result object comprising a data classification mechanism operable to facilitate performance of a predictive analysis by the Neugent.

Thus, "forwarding to the remote client machine through the computer network a training result object returned by the Neugent, the training result object comprising a data classification mechanism operable to facilitate performance of a predictive analysis by the Neugent," is one practical application of independent Claim 22, the useful, concrete, and tangible result being the training result object returned by the Neugent that is forwarded to the remote client machine through the computer network and that comprises a data classification mechanism operable to facilitate performance of a predictive analysis by the Neugent.

³ The citations to Applicants' Specification are merely examples intended to illustrate that the Specification discloses at least one practical application of certain embodiments of Applicants' invention. These citations should not be used to limit the scope of Applicants' claims to any particular embodiments.

Additionally, Applicants respectfully direct the Examiner's attention to at least the following portions of Applicants' Specification: Page 2, Line 2 thought Page 3, Line 6; Page 9, Line 21 through Page 11, Line 10; Page 14, Lines 9-16; and Page 16, Lines 1-14. Applicants' specification asserts at least one practical application of certain embodiments of Applicants' invention and identifies the advancement of the technical arts.⁴

For at least these reasons, Applicants respectfully submit that independent Claim 22 recites patentable subject matter. For at least certain analogous reasons, Applicants respectfully submit that independent Claim 23 recites patentable subject matter. Thus, Applicants respectfully request that the Examiner withdraw the rejections of these claims under 35 U.S.C. § 101.

II. The Claims Comply with 35 U.S.C. § 112, First Paragraph

The Examiner rejects Claims 1-25 under 35 U.S.C. § 112, first paragraph, because, according to the Examiner, "current case law (and accordingly, the MPEP) require such a rejection if a §101 rejection is given because when Applicant has not in fact disclosed the practical application for the invention, as a matter of law there is no way Applicants could have disclosed how to practice the undisclosed practical application." (Final Office Action at 8)

As Applicants demonstrated above, independent Claims 1, 18-19, and 22-23, and thus their dependent claims, recite useful, concrete, and tangible results and are directed to patentable subject matter under 35 U.S.C. § 101. Since the Examiner based the rejection of these claims under 35 U.S.C. § 112, first paragraph, on the rejections of these claims under 35 U.S.C. § 101, Applicants respectfully submit that the rejections under 35 U.S.C. § 112, first paragraph, must be withdrawn. In any event, Applicants respectfully submit that each of Applicants' claims complies with 35 U.S.C. § 112, first paragraph.

⁴ As discussed above, the citations to Applicants' Specification are merely examples intended to illustrate that the Specification discloses at least one practical application of certain embodiments of Applicants' invention. These citations should not be used to limit the scope of Applicants' claims to any particular embodiments.

For at least these reasons, Applicants respectfully submit that Claims 1-19, and 22-23, comply with 35 U.S.C. § 112, first paragraph. Thus, Applicants respectfully request that the Examiner withdraw the rejection of these claims under 35 U.S.C. § 112, first paragraph.

III. New Claims 26-43 are Allowable

Applicants have added new dependent Claims 26-41 and new independent Claims 42-43, none of which are believed to introduce any new matter. New dependent Claims 26-41 depend from independent Claim 18, which Applicants have shown to be clearly allowable over the Examiner's rejections, and are allowable for at least this reason. New independent Claims 42-43 are directed to software and are allowable for at least certain reasons analogous to those discussed above with reference to independent Claims 1 and 22, respectively.

For at least these reasons, Applicants respectfully request consideration and allowance of new Claims 26-43.

IV. No Waiver

All of Applicants' arguments and amendments are without prejudice or disclaimer. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements.

Conclusion

Applicants have made an earnest attempt to place this case in condition for allowance. For at least the foregoing reasons, Applicants respectfully request full allowance of all pending claims.

If the Examiner feels that a telephone conference would advance prosecution of this Application in any manner, the Examiner is invited to contact Chad D. Terrell, Attorney for Applicants, at the Examiner's convenience at (214) 953-6813.

Applicants submitted a check in the amount of \$1,500.00 with the previous Response to cover the cost of fourteen new claims total over twenty and four independent claims over three. Applicants enclose a check in the amount of \$790.00 to cover the RCE filing fee and a check in the amount of \$450.00 to cover a two-month extension-of-time fee. Although no other fees are believed due at this time, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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